

SEQUENCE LISTING

<110> LANE, Roger Michael  
POLYMERPOULOS, Mihael Hristos

<120> METHODS FOR THE TREATMENT OF DEMENTIA  
BASED ON APO E GENOTYPE

<130> DV/4-32609A/USN

<140> 10/523,047  
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<150> PCT/EP03/008719  
<151> 2003-07-06

<150> 60/401,694  
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<221> mat\_peptide  
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Gln Thr Leu Ser Glu Gln Val Gln Glu Glu Leu Leu Ser Ser Gln Val	
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Thr Gln Glu Leu Arg Ala Leu Met Asp Glu Thr Met Lys Glu Leu Lys	
60 65 70	
gcc tac aaa tcg gaa ctg gag gaa caa ctg acc ccg gtg gcg gag gag	401
Ala Tyr Lys Ser Glu Leu Glu Glu Gln Leu Thr Pro Val Ala Glu Glu	
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acg cgg gca cgg ctg tcc aag gag ctg cag gcg gcg cag gcc cgg ctg	449
Thr Arg Ala Arg Leu Ser Lys Glu Leu Gln Ala Ala Gln Ala Arg Leu	
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ggc gcg gac atg gag gac gtg tgc ggc cgc ctg gtg cag tac cgc ggc	497
Gly Ala Asp Met Glu Asp Val Cys Gly Arg Leu Val Gln Tyr Arg Gly	
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gag gtg cag gcc atg ctc ggc cag agc acc gag gag ctg cgg gtg cgc	545
Glu Val Gln Ala Met Leu Gly Gln Ser Thr Glu Glu Leu Arg Val Arg	
125 130 135	
ctc gcc tcc cac ctg cgc aag ctg cgt aag cgg ctc ctc cgc gat gcc	593
Leu Ala Ser His Leu Arg Lys Leu Arg Lys Arg Leu Leu Arg Asp Ala	
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Asp Asp Leu Gln Lys Cys Leu Ala Val Tyr Gln Ala Gly Ala Arg Glu	
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Gly Ala Glu Arg Gly Leu Ser Ala Ile Arg Glu Arg Leu Gly Pro Leu	
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Val Glu Gln Gly Arg Val Arg Ala Ala Thr Val Gly Ser Leu Ala Gly	
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Gln Pro Leu Gln Glu Arg Ala Gln Ala Trp Gly Glu Arg Leu Arg Ala	
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Arg Met Glu Glu Met Gly Ser Arg Thr Arg Asp Arg Leu Asp Glu Val	
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Lys Glu Gln Val Ala Glu Val Arg Ala Lys Leu Glu Glu Gln Ala Gln	
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 Gln Ile Arg Leu Gln Ala Glu Ala Phe Gln Ala Arg Leu Lys Ser Trp  
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ttc gag ccc ctg gtg gaa gac atg cag cgc cag tgg gcc ggg ctg gtg 977  
 Phe Glu Pro Leu Val Glu Asp Met Gln Arg Gln Trp Ala Gly Leu Val  
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gag aag gtg cag gct gcc gtg ggc acc agc gcc gcc cct gtg ccc agc 1025  
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 Asp Asn His \*

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 Gly Arg Phe Trp Asp Tyr Leu Arg Trp Val Gln Thr Leu Ser Glu Gln  
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 Val Gln Glu Glu Leu Leu Ser Ser Gln Val Thr Gln Glu Leu Arg Ala  
 50 55 60  
 Leu Met Asp Glu Thr Met Lys Glu Leu Lys Ala Tyr Lys Ser Glu Leu  
 65 70 75  
 Glu Glu Gln Leu Thr Pro Val Ala Glu Glu Thr Arg Ala Arg Leu Ser  
 80 85 90  
 Lys Glu Leu Gln Ala Ala Gln Ala Arg Leu Gly Ala Asp Met Glu Asp  
 95 100 105 110  
 Val Cys Gly Arg Leu Val Gln Tyr Arg Gly Glu Val Gln Ala Met Leu  
 115 120 125  
 Gly Gln Ser Thr Glu Glu Leu Arg Val Arg Leu Ala Ser His Leu Arg  
 130 135 140  
 Lys Leu Arg Lys Arg Leu Leu Arg Asp Ala Asp Asp Leu Gln Lys Cys  
 145 150 155  
 Leu Ala Val Tyr Gln Ala Gly Ala Arg Glu Gly Ala Glu Arg Gly Leu  
 160 165 170  
 Ser Ala Ile Arg Glu Arg Leu Gly Pro Leu Val Glu Gln Gly Arg Val  
 175 180 185 190  
 Arg Ala Ala Thr Val Gly Ser Leu Ala Gly Gln Pro Leu Gln Glu Arg

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Ala	Gln	Ala	Trp	Gly	Glu	Arg	Leu	Arg	Ala	Arg	Met	Glu	Glu	Met	Gly		
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Ser	Arg	Thr	Arg	Asp	Arg	Leu	Asp	Glu	Val	Lys	Glu	Gln	Val	Ala	Glu		
		225					230					235					
Val	Arg	Ala	Lys	Leu	Glu	Glu	Gln	Ala	Gln	Gln	Ile	Arg	Leu	Gln	Ala		
	240					245					250						
Glu	Ala	Phe	Gln	Ala	Arg	Leu	Lys	Ser	Trp	Phe	Glu	Pro	Leu	Val	Glu		
255					260					265					270		
Asp	Met	Gln	Arg	Gln	Trp	Ala	Gly	Leu	Val	Glu	Lys	Val	Gln	Ala	Ala		
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Val	Gly	Thr	Ser	Ala	Ala	Pro	Val	Pro	Ser	Asp	Asn	His					
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 <223> ApoE mRNA, e3 variant

<221> CDS  
 <222> (84)...(1037)

<221> sig\_peptide  
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<221> mat\_peptide  
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cgc tgg gaa ctg gca ctg ggt cgc ttt tgg gat tac ctg cgc tgg gtg 257  
 Arg Trp Glu Leu Ala Leu Gly Arg Phe Trp Asp Tyr Leu Arg Trp Val  
 25 30 35 40

cag aca ctg tct gag cag gtg cag gag gag ctg ctc agc tcc cag gtc 305  
 Gln Thr Leu Ser Glu Gln Val Gln Glu Leu Leu Ser Ser Gln Val  
 45 50 55

acc cag gaa ctg agg gcg ctg atg gac gag acc atg aag gag ttg aag 353

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Ala	Tyr	Lys	Ser	Glu	Leu	Glu	Glu	Gln	Leu	Thr	Pro	Val	Ala	Glu	Glu	
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Thr	Arg	Ala	Arg	Leu	Ser	Lys	Glu	Leu	Gln	Ala	Ala	Gln	Ala	Arg	Leu	
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ggc	gcg	gac	atg	gag	gac	gtg	tgc	ggc	cgc	ctg	gtg	cag	tac	cgc	ggc	497
Gly	Ala	Asp	Met	Glu	Asp	Val	Cys	Gly	Arg	Leu	Val	Gln	Tyr	Arg	Gly	
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Glu	Val	Gln	Ala	Met	Leu	Gly	Gln	Ser	Thr	Glu	Glu	Leu	Arg	Val	Arg	
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ctc	gcc	tcc	cac	ctg	cgc	aag	ctg	cgt	aag	cgg	ctc	ctc	cgc	gat	gcc	593
Leu	Ala	Ser	His	Leu	Arg	Lys	Leu	Arg	Lys	Arg	Leu	Leu	Arg	Asp	Ala	
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Gly	Ala	Glu	Arg	Gly	Leu	Ser	Ala	Ile	Arg	Glu	Arg	Leu	Gly	Pro	Leu	
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Val	Glu	Gln	Gly	Arg	Val	Arg	Ala	Ala	Thr	Val	Gly	Ser	Leu	Ala	Gly	
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Gln	Pro	Leu	Gln	Glu	Arg	Ala	Gln	Ala	Trp	Gly	Glu	Arg	Leu	Arg	Ala	
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Lys	Glu	Gln	Val	Ala	Glu	Val	Arg	Ala	Lys	Leu	Glu	Glu	Gln	Ala	Gln	
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cag	ata	cgc	ctg	cag	gcc	gag	gcc	ttc	cag	gcc	cgc	ctc	aag	agc	tgg	929
Gln	Ile	Arg	Leu	Gln	Ala	Glu	Ala	Phe	Gln	Ala	Arg	Leu	Lys	Ser	Trp	
	250					255					260					
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Phe	Glu	Pro	Leu	Val	Glu	Asp	Met	Gln	Arg	Gln	Trp	Ala	Gly	Leu	Val	
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gag	aag	gtg	cag	gct	gcc	gtg	ggc	acc	agc	gcc	gcc	cct	gtg	ccc	agc	1025
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285

290

295

gac aat cac tga acgccgaagc ctgcagccat gcgacccac gccaccccggt 1077  
 Asp Asn His \*

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&lt;210&gt; 4

&lt;211&gt; 317

&lt;212&gt; PRT

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&lt;220&gt;

&lt;221&gt; SIGNAL

&lt;222&gt; (1)...(18)

&lt;400&gt; 4

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Gly	Arg	Phe	Trp	Asp	Tyr	Leu	Arg	Trp	Val	Gln	Thr	Leu	Ser	Glu	Gln	
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Lys	Glu	Leu	Gln	Ala	Ala	Gln	Ala	Arg	Leu	Gly	Ala	Asp	Met	Glu	Asp	
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Val	Cys	Gly	Arg	Leu	Val	Gln	Tyr	Arg	Gly	Glu	Val	Gln	Ala	Met	Leu	
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Gly	Gln	Ser	Thr	Glu	Glu	Leu	Arg	Val	Arg	Leu	Ala	Ser	His	Leu	Arg	
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Leu	Ala	Val	Tyr	Gln	Ala	Gly	Ala	Arg	Glu	Gly	Ala	Glu	Arg	Gly	Leu	
		160				165					170					
Ser	Ala	Ile	Arg	Glu	Arg	Leu	Gly	Pro	Leu	Val	Glu	Gln	Gly	Arg	Val	
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Arg	Ala	Ala	Thr	Val	Gly	Ser	Leu	Ala	Gly	Gln	Pro	Leu	Gln	Glu	Arg	
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Ala	Gln	Ala	Trp	Gly	Glu	Arg	Leu	Arg	Ala	Arg	Met	Glu	Glu	Met	Gly	
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Ser	Arg	Thr	Arg	Asp	Arg	Leu	Asp	Glu	Val	Lys	Glu	Gln	Val	Ala	Glu	
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Val	Arg	Ala	Lys	Leu	Glu	Gln	Ala	Gln	Gln	Ile	Arg	Leu	Gln	Ala		
		240				245				250						
Glu	Ala	Phe	Gln	Ala	Arg	Leu	Lys	Ser	Trp	Phe	Glu	Pro	Leu	Val	Glu	
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Asp	Met	Gln	Arg	Gln	Trp	Ala	Gly	Leu	Val	Glu	Lys	Val	Gln	Ala	Ala	

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Val	Gly	Thr	Ser	Ala	Ala	Pro	Val	Pro	Ser	Asp	Asn	His			
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 Met Lys Val Leu Trp Ala Ala Leu Leu Val  
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 Thr Phe Leu Ala Gly Cys Gln Ala Lys Val Glu Gln Ala Val Glu Thr  
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gag ccg gag ccc gag ctg cgc cag cag acc gag tgg cag agc ggc cag 209  
 Glu Pro Glu Pro Glu Leu Arg Gln Gln Thr Glu Trp Gln Ser Gly Gln  
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 Arg Trp Glu Leu Ala Leu Gly Arg Phe Trp Asp Tyr Leu Arg Trp Val  
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 Thr Gln Glu Leu Arg Ala Leu Met Asp Glu Thr Met Lys Glu Leu Lys  
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 75 80 85

acg cgg gca cgg ctg tcc aag gag ctg cag gcg gcg cag gcc cgg ctg 449  
 Thr Arg Ala Arg Leu Ser Lys Glu Leu Gln Ala Ala Gln Ala Arg Leu  
 90 95 100

ggc gcg gac atg gag gac gtg cgc ggc cgc ctg gtg cag tac cgc ggc Gly Ala Asp Met Glu Asp Val Arg Gly Arg Leu Val Gln Tyr Arg Gly 105 110 115 120	497
gag gtg cag gcc atg ctc ggc cag agc acc gag gag ctg cgg gtg cgc Glu Val Gln Ala Met Leu Gly Gln Ser Thr Glu Glu Leu Arg Val Arg 125 130 135	545
ctc gcc tcc cac ctg cgc aag ctg cgt aag cgg ctc ctc cgc gat gcc Leu Ala Ser His Leu Arg Lys Leu Arg Lys Arg Leu Leu Arg Asp Ala 140 145 150	593
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gag aag gtg cag gct gcc gtg ggc acc agc gcc gcc cct gtg ccc agc Glu Lys Val Gln Ala Ala Val Gly Thr Ser Ala Ala Pro Val Pro Ser 285 290 295	1025
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 Gly Arg Phe Trp Asp Tyr Leu Arg Trp Val Gln Thr Leu Ser Glu Gln  
                                   35                                  40                                  45  
 Val Gln Glu Glu Leu Leu Ser Ser Gln Val Thr Gln Glu Leu Arg Ala  
                                   50                                  55                                  60  
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                   80                                  85                                  90  
 Lys Glu Leu Gln Ala Ala Gln Ala Arg Leu Gly Ala Asp Met Glu Asp  
 95                                  100                                  105                                  110  
 Val Arg Gly Arg Leu Val Gln Tyr Arg Gly Glu Val Gln Ala Met Leu  
                                   115                                  120                                  125  
 Gly Gln Ser Thr Glu Glu Leu Arg Val Arg Leu Ala Ser His Leu Arg  
                                   130                                  135                                  140  
 Lys Leu Arg Lys Arg Leu Leu Arg Asp Ala Asp Asp Leu Gln Lys Arg  
                   145                                  150                                  155  
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                   160                                  165                                  170  
 Ser Ala Ile Arg Glu Arg Leu Gly Pro Leu Val Glu Gln Gly Arg Val  
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 Arg Ala Ala Thr Val Gly Ser Leu Ala Gly Gln Pro Leu Gln Glu Arg  
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                   240                                  245                                  250  
 Glu Ala Phe Gln Ala Arg Leu Lys Ser Trp Phe Glu Pro Leu Val Glu  
 255                                  260                                  265                                  270  
 Asp Met Gln Arg Gln Trp Ala Gly Leu Val Glu Lys Val Gln Ala Ala  
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 Val Gly Thr Ser Ala Ala Pro Val Pro Ser Asp Asn His  
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